P_S = Potency of working standard solution in micrograms per milliliter;
d = Dilution factor of the sample; and
n = Number of tablets in the sample assayed.

(2) *Moisture.* Proceed as directed in § 436.201 of this chapter.

(3) *Dissolution.* Proceed as directed in § 436.215 of this chapter. The quantity Q (the amount of cefadroxil dissolved) is 75 percent within 30 minutes.

[59 FR 8857, Feb. 24, 1994]

§ 442.115 Cefixime trihydrate oral dosage forms.

§ 442.115a Cefixime trihydrate for oral suspension.

(a) *Requirements for certification*—(1) *Standards of identity, strength, quality, and purity.* Cefixime trihydrate for oral suspension is cefixime trihydrate with one or more suitable and harmless preservatives, suspending agents, diluents, and flavorings. When reconstituted as directed in the labeling, each milliliter contains the equivalent of 20 milligrams of cefixime. Its cefixime trihydrate potency is satisfactory if it is not less than 90 percent and not more than 120 percent of the number of milligrams of cefixime that it is represented to contain. Its moisture content is not more than 2.0 percent. When reconstituted as described in labeling, the pH of the suspension is not less than 2.5 and not more than 4.5. It passes the identity test for the presence of the cefixime moiety. The cefixime trihydrate used conforms to the standards prescribed by § 442.15(a)(1) of this part.

(2) *Labeling.* It shall be labeled in accordance with the requirements of § 436.5 of this chapter.

(3) *Requests for certification; samples.* In addition to complying with the requirements of § 431.1 of this chapter, each such request shall contain:

(i) Results of tests and assays on:

(A) The cefixime trihydrate used in making the batch, for potency, moisture, pH, crystallinity, specific rotation, and identity.

(B) The batch, for content, moisture, pH, and identity.

(ii) Samples, if required by the Director, Center for Drug Evaluation and Research.

(A) The cefixime used in making the batch: 10 packages, each containing approximately 500 milligrams.

(B) The batch: A minimum of 10 immediate containers.

(b) *Tests and methods of assay*—(1) *Content.* Proceed as directed in § 442.15(b)(1) of this part, preparing the sample solution and calculating the cefixime content as follows:

(i) *Preparation of the sample solution.* Reconstitute as directed in the labeling. Transfer a 5.0-milliliter portion of the suspension into an appropriately sized volumetric flask and quantitatively dilute stepwise with 0.1*M* phosphate buffer, pH 7.0, to obtain a concentration of 0.2 milligram of cefixime activity per milliliter (estimated).

(ii) *Calculations.* Calculate the cefixime content as follows:

$$\text{Milligrams of cefixime per 5 milliliters of sample} = \frac{A_u \times P_s \times d}{A_s \times 1{,}000}$$

where:
A_u = Area of the cefixime peak in the chromatogram of the sample (at a retention time equal to that observed for the standard);
A_s = Area of the cefixime peak in the chromatogram of the cefixime working standard.
P_s = Cefixime activity in the cefixime working standard solution in micrograms per milliliter; and
d = Dilution factor of the sample.

(2) *Moisture.* Proceed as directed in § 436.201 of this chapter.

(3) *pH.* Proceed as directed in § 436.202 of this chapter, using the drug reconstituted as directed in the labeling.

(4) *Identity.* The high performance liquid chromatogram of the sample determined as directed in paragraph (b)(1) of this section, compares qualitatively to that of the cefixime working standard.

[53 FR 24259, June 28, 1988]

§ 442.115b Cefixime trihydrate tablets.

(a) *Requirements for certification*—(1) *Standards of identity, strength, quality, and purity.* Cefixime trihydrate tablets are composed of cefixime trihydrate and one or more suitable and harmless diluents, binders, lubricants, colorings, and coating substances. Each tablet

contains cefixime trihydrate equivalent to either 200 milligrams or 400 milligrams of cefixime. Its cefixime trihydrate content is satisfactory if it is not less than 90 percent and not more than 110 percent of the number of milligrams of cefixime that it is represented to contain. Its moisture content is not more than 10.0 percent. It passes the dissolution test. It passes the identity test for the presence of the cefixime moiety. The cefixime used conforms to the standards prescribed by §442.15(a)(1) of this part.

(2) *Labeling.* It shall be labeled in accordance with the requirements of §432.5 of this chapter.

(3) *Requests for certification; samples.* In addition to complying with the requirements of §431.1 of this chapter, each such request shall contain:

(i) Results of tests and assays on:

(A) The cefixime used in making the batch for potency, moisture, pH, crystallinity, specific rotation, and identity.

(B) The batch, for content, moisture, dissolution, and identity.

(ii) Samples, if required by the Director, Center for Drug Evaluation and Research.

(A) The cefixime used in making the batch: 10 packages, each containing approximately 500 milligrams.

(B) The batch: A minimum of 10 immediate containers.

(b) *Tests and methods of assay*—(1) *Content.* Proceed as directed in §442.15(b)(1) of this part, preparing the sample solution and calculating the cefixime content as follows:

(i) *Preparation of sample solution.* Grind one or a known number of tablets using a mortar and pestle. Quantitatively transfer the ground tablet(s) into a suitable volumetric flask, sonicate and dilute with 0.1*M* phosphate buffer, pH 7.0 to a concentration of 4 milligrams per milliliter. Centrifuge the sample at 3,000 revolutions per minute for 10 minutes. Take an aliquot of the supernatant and qualitatively dilute to a concentration of 0.2 milligram of cefixime activity per milliliter in 0.1*M* phosphate buffer, pH 7.0 (estimated).

(ii) *Calculations.* Calculate the cefixime content as follows:

$$\text{Milligrams of cefixime per tablet} = \frac{A_u \times P_s \times d}{A_s \times n}$$

where:

A_u = Area of the cefixime peak in the chromatogram of the sample (at a retention time equal to that observed for the standard);

A_s = Area of the cefixime peak in the chromatogram of the cefixime working standard.

P_s = Cefixime activity in the cefixime working standard solution in micrograms per milliliter;

d = Dilution factor of the sample; and

n = Number of tablets in the sample.

(2) *Moisture.* Proceed as directed in §436.201 of this chapter.

(3) *Dissolution test.* Proceed as directed in §436.215 of this chapter. The quantity Q (the amount of cefixime dissolved) is 75 percent within 45 minutes.

(4) *Identity.* The high-performance liquid chromatogram of the sample determined as directed in paragraph (b)(1) of this section compares qualitatively to that of the cefixime working standard.

[53 FR 24259, June 28, 1988]

§442.119 Cefuroxime axetil oral dosage forms.

§442.119a Cefuroxime axetil tablets.

(a) *Requirements for certification*—(1) *Standards of identity, strength, quality, and purity.* Cefuroxime axetil tablets are composed of cefuroxime axetil and one or more suitable and harmless diluents, binders, lubricants, and colorings. Each tablet contains 125 milligrams, 250 milligrams, or 500 milligrams of cefuroxime activity. Its potency is satisfactory if it is not less than 90 percent and not more than 110 percent of the number of milligrams of cefuroxime activity that it is represented to contain. Its moisture content is not more than 2.0 percent at the time of certification and not more than 6.0 percent at the time of expiry. It passes the dissolution test. It passes the film-coat rupture test. It passes the identity test. The cefuroxime axetil used conforms to the standards prescribed by §442.19(a)(1).

(2) *Labeling.* It shall be labeled in accordance with the requirements of §432.5 of this chapter.